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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/662,082	09/12/2003	Kenneth J. Taylor	56232.2-CON	9804

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EXAMINER	
GORTAYO, DANGELINO N	
ART UNIT	PAPER NUMBER
2168	
MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/662,082	TAYLOR, KENNETH J.	
	Examiner	Art Unit	
	DANGELINO N. GORTAYO	2168	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *13 May 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *7-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *7-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. In the amendment filed on 3/12/2009, claims 7, 10, and 11 have been amended. The currently pending claims considered below are Claims 7-11.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claim 11 recites the limitation "said backup utility" in line 1 of the claim. There is insufficient antecedent basis for this limitation in the claim, as the limitation it is referring to, previously present in claim 10, was deleted in the claim amendment filed 6/18/2009. Proper correction is required.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bamford et al. ("Bamford" US Patent 5,449,367, issued 3/12/1996) in view of Crowe et al. (US Patent 5,970,488)

As per claim 7, Bamford teaches "In a computer system having a plurality of nodes, each node having access to a shared common database and also having local storage," (see Abstract, Figure 3, wherein client nodes composed of memory and a processor access a shared database)

"providing a local archived redo log in local storage for said node, said node including information regarding data in said shared common database" (Figure 3, column 5 lines 55-64, column 6 lines 20-30, 42-53, wherein each client is provided with a log and access to a common database)

selecting at least one of said nodes to perform an operation to completely rewrite said information regarding data in said shared common database included in said node (column 6 line 42- column 7 line 20, column 12 line 10 – column 14 line 9, wherein a client is chosen and submits database modification requests, and log information is written describing data from a shared database, including tracking change information)

"obtaining information regarding a directory location of said local redo log for said at least one node;" (column 7 lines 42-61, column 8 lines 33-54, column 9 line 56 – column 10 line 15, column 10 lines 23-59, column 13 lines 6-10, column 14 lines 3-9, wherein a log is located for the client, the log can be identified by a data dictionary containing the location in the database, the location being an area as defined by the system, including a data block or a specific file and location of the file)

"setting said local redo log to be read/write accessible by said selected at least one node;" (column 6 lines 3-14 and lines 31-39, wherein the log can be read and written by clients)

backing up database data files, control files, and archived redo log in said shared common database by accessing data in said shared common database and also in said local redo log (Figure 3, Figure 9, column 6 lines 56-67, column 8 lines 55-67, column 10 lines 8-15, column 12 line 50 – column 14 line 9, wherein a shared database controller stores log data in a log storage, database data in a database buffer, request controller, and location data in a data dictionary and is accessed by a client)

Bamford does not teach selecting a node to perform backup operations and backing up data in said node by accessing data in said node to provide backup data and completely rewriting said database data files to a backup system.

Crowe teaches selecting a node to perform backup operations and backing up data in said node by accessing data in said node to provide backup data and completely rewriting said database data files to a backup system. (column 2 lines 19-28, column 10 line 57 – column 11 line 27, column 11 lines 53-65, column 12 lines 52-62, wherein a copy of the database is stored in each machine and an updated table list is stored with an updated record list to track and access copies of the database)

It would have been obvious at the time of the invention for one of ordinary skill in the art to combine Bamford's method of providing a log system to clients in a system that tracks information in a central database with Crowe's method of storing a complete copy of a database in a plurality of nodes for backup purposes. This gives the user the

advantage of providing multiple backup nodes in Bamford's method in addition to the recovery process to respond to failures in the system. The motivation for doing so would be speed up an update process and reduce the cost of maintaining copies of data in a database system (column 2 lines 1-16).

As per claim 8, Bamford teaches "said archived redo logs in local files on each of said nodes are set to be read and write accessible through mounting with a network file system (NFS), using the same name each of said nodes." (column 33-67)

As per claim 9, Bamford teaches "said archived redo logs are created with names which allow a backup or recover utility to identify to which node an archived redo log belongs." (column 10 lines 14-28)

As per claim 10, Crowe teaches "before said step of backing up database files, control files and said archived redo logs for said computer system, shutting down access to said shared common database." (column 9 lines 27-43)

As per claim 11, Crowe teaches "said backup utility allows for a user- supplied scripts for shutting down access to said common data." (column 9 lines 27-43)

Response to Arguments

6. Applicant's arguments, see page 4, filed 5/13/2009, with respect to the rejection of claims 7-11 in regards to 35 USC 103(a) have been fully considered but they are not persuasive.

a. Examiner is entitled to give claim limitations their broadest reasonable interpretation in light of the specification. See MPEP 2111 [R-I]

Interpretation of Claims-Broadest Reasonable Interpretation

During patent examination, the pending claims must be 'given the broadest reasonable interpretation consistent with the specification.' Applicant always has the opportunity to amend the claims during prosecution and broad interpretation by the examiner reduces the possibility that the claim, once issued, will be interpreted more broadly than is justified. In re Prater, 162 USPQ 541,550-51 (CCPA 1969).

b. Applicant's arguments is stated as Bamford in view of Crowe does not teach backing up of database files by completely rewriting said database data files to a backup system

In regards to the argument, examiner respectfully disagrees. As disclosed above, the prior art of Bamford teaches that a plurality of clients can access a database and log data through a database controller (Figure 9). As disclosed by Bamford in column 12 line 50 - column 14 line 9, the database controller accessed by the clients contain a log buffer containing log data, a database buffer containing database data, and a data dictionary containing data access information such as location. As similarly disclosed in the second limitation of instant claim 7, Bamford's method of writing log data in a log buffer writes and stores information regarding data in said shared common database accessible by a plurality of clients. The second limitation of the instant claim, as written, states thathe node is selected to perform backup operation to "completely rewrite said information regarding data in said shared common database", which Bamford

teaches above. As stated in column 6 line 42 – column 7 line 20, data is copied from a common database to a cache buffer, and log information is recorded regarding the data that is read. Therefore, Bamford teaches recording log data, information regarding the data stored in a common database, in a log buffer at a client's request.

As disclosed above, the prior art of Crowe, which teaches selecting a client node to store a copy of a common database and to maintain an updated table list (column 2 lines 19-28, column 10 line 57- column 11 line 65), is incorporated into the system of Bamford that teaches maintaining database integrity through multiple logs for a plurality of clients regarding data in a common database, to provide complete copies of database information to a plurality of nodes, as well as recovery through log information. By combining the prior art of Bamford and Crowe, recovery for data in the event of contention is provided, as well as providing copies of the common database to a plurality of nodes, that can then be used in a recovery process. As disclosed by Bamford, a transaction is made by a client, and the database data is then copied and rewritten into a cache buffer, as well as log information regarding the transaction, to be able to recover in the case of contention. The ability of Bamford to copy database information into a cache buffer is modified with the prior art of Crowe to write a copy of database data to a plurality of clients, while still providing recovery. Therefore, Bamford in view of Crowe teaches backing up of database files by completely rewriting said database data files to a backup system.

c. Applicant's argument is stated as Bamford in view of Crowe does not teach obtaining information regarding a directory location of said local redo log for said at least one node.

In regards to the argument, Examiner respectfully disagrees. As disclosed above, Bamford teaches that changes in data stored in a database are tracked in a log, and that a data dictionary is used to track database data. As disclosed in column 7 lines 42-61, the data dictionary contains the location of data within the database. As further disclosed in column 8 lines 33-67, the database areas can be divided into any number of different sections, such as files, records, or directories, and can be uniquely identified by utilizing the data dictionary and the sequence number to identify data. The information stored in the database can be applied to any logical or physical subdivision of the database, including directories, provided the area specified in the log entry appears as a single unit, for recovery purposes. This is further shown in column 9 line 56 – column 10 line 15, wherein the log entries are directed to specific area definitions, including specific rows, data blocks, and entire files. An example of this is in column 13 lines 6-17, wherein in response to a data modification, data is identified using the data dictionary and the log data and database data is stored. Specifically, the client makes a request for database modification and the areas to be modified are identified, which is then recorded in the log. Therefore, Bamford in view of Crowe teaches obtaining information regarding a directory location of said local redo log for said at least one node.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to DANGELINO N. GORTAYO whose telephone number is (571)272-7204. The examiner can normally be reached on M-F 7:30-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tim T. Vo can be reached on (571)272-3642. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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